ABSTRACT OF THE DISCLOSURE

Mechanisms for achieving consistent message ordering within a fault-tolerant distributed computer system based on semi-active or passive replication are described. The mechanisms communicate message ordering information from the primary replica to its backup replicas in such a way as to minimize the end-to-end request/response time, to minimize the number of additional messages that are multicast, and to ensure that, in the event of a fault, a backup replica has, or can obtain, the messages and the message ordering information that it needs to reproduce the actions of the primary replica.